WHAT IS CLAIMED IS:

1. Seed of corn inbred line designated 4VP500, representative seed of said line having been deposited under ATCC Accession No. _____.
2. A corn plant, or parts thereof, produced by growing the seed of claim 1.
3. Pollen of the plant of claim 2.
4. An ovule of the plant of claim 2.
5. A corn plant, or parts thereof, having all of the physiological and morphological characteristics of the corn plant of claim 2.
6. The corn plant of claim 2, wherein said plant is male sterile.
7. A tissue culture of regenerable cells from the corn plant of claim 2.
8. A tissue culture according to claim 7, the cells or protoplasts of the tissue culture being from a tissue selected from the group consisting of leaves, pollen, embryos, roots, root tips, anthers, silks, flowers, kernels, ears, cobs, husks, and stalks.
9. A corn plant regenerated from the tissue culture of claim 7, wherein the regenerated plant is capable of expressing all the morphological and physiological characteristics of inbred line 4VP500.
10. A corn plant with all of the physiological and morphological characteristics of corn inbred 4VP500, wherein said corn plant is produced by a tissue culture process using the corn plant of claim 5 as the starting material for such a process.
11. A method for producing a hybrid corn seed comprising crossing a first inbred parent corn plant with a second inbred parent corn plant and harvesting the resultant hybrid corn seed, wherein said first inbred parent corn plant or second said parent corn plant is the corn plant of claim 2.
12. A hybrid corn seed produced by the method of claim 11.
13. A hybrid corn plant, or parts thereof, produced by growing said hybrid corn seed of claim 12.
14. A corn seed produced by growing said corn plant of claim 13 and harvesting the resultant corn seed.

15. An $F_1$ hybrid seed produced by crossing the inbred corn plant according to claim 2 with another, different corn plant.

16. A hybrid corn plant, or its parts, produced by growing said hybrid corn seed of claim 15.

17. A method for producing inbred 4VP500, representative seed of which have been deposited under ATCC Accession No. _____, comprising:

    a) planting a collection of seed comprising seed of a hybrid, one of whose parents is inbred 4VP500, said collection also comprising seed of said inbred;

    b) growing plants from said collection of seed;

    c) identifying inbred parent plants;

    d) controlling pollination in a manner which preserves the homozygosity of said inbred parent plant; and

    e) harvesting the resultant seed.

18. The process of claim 17 wherein step (c) comprises identifying plants with decreased vigor.

19. A method for producing a 4VP500-derived corn plant, comprising:

    a) crossing inbred corn line 4VP500, representative seed of said line having been deposited under ATCC accession number _____, with a second corn plant to yield progeny corn seed; and

    b) growing said progeny corn seed, under plant growth conditions, to yield said 4VP500-derived corn plant.

20. A 4VP500-derived corn plant, or parts thereof, produced by the method of claim 19, said 4VP500-derived corn plant expressing a combination of at least two 4VP500 traits selected from the group consisting of: a relative maturity of approximately 85 to 100 days, high yield, above average stalk strength, above average test weight, above average stay green, good stalk lodging resistance, and adapted to the Central Corn Belt, Northeast, Southeast, Southcentral, Southwest or Western regions of the United States.

21. The method of claim 19, further comprising:

c) crossing said 4VP500-derived corn plant with itself or another corn plant to yield additional 4VP500-derived progeny corn seed;

d) growing said progeny corn seed of step (c) under plant growth conditions, to yield additional 4VP500-derived corn plants; and

e) repeating the crossing and growing steps of (c) and (d) from 0 to 7 times to generate further 4VP500-derived corn plants.

22. A further 4VP500-derived corn plant, or parts thereof, produced by the method of claim 21.

23. The further 4VP500-derived corn plant, or parts thereof, of claim 22, wherein said further 4VP500-derived corn plant, or parts thereof, express a combination of at least two 4VP500 traits selected from the group consisting of: a relative maturity of approximately 85 to 100 days, high yield, above average stalk strength, above average test weight, above average stay green, good stalk lodging resistance, and adapted to the Central Corn Belt, Northeast, Southeast, Southcentral, Southwest or Western regions of the United States.

24. The method of claim 19, still further comprising utilizing plant tissue culture methods to derive progeny of said 4VP500-derived corn plant.

25. A 4VP500-derived corn plant, or parts thereof, produced by the method of claim 24, said 4VP500-derived corn plant expressing a combination of at least two 4VP500 traits selected from the group consisting of: a relative

maturity of approximately 85 to 100 days, high yield, above average stalk strength, above average test weight, above average stay green, good stalk lodging resistance, and adapted to the Central Corn Belt, Northeast, Southeast, Southcentral, Southwest or Western regions of the United States.

26. The corn plant, or parts thereof, of claim 2, wherein the plant or parts thereof have been transformed so that its genetic material contains one or more transgenes operably linked to one or more regulatory elements.

27. A method for producing a corn plant that contains in its genetic material one or more transgenes, comprising crossing the corn plant of claim 26 with either a second plant of another corn line, or a non-transformed corn plant of the line 4VP500, so that the genetic material of the progeny that result from the cross contains the transgene(s) operably linked to a regulatory element.

28. Corn plants, or parts thereof, produced by the method of claim 27.

29. A corn plant, or parts thereof, wherein at least one ancestor of said corn plant is the corn plant of claim 2, said corn plant expressing a combination of at least two 4VP500 traits selected from the group consisting of: a relative maturity of approximately 85 to 100 days, high yield, above average stalk strength, above average test weight, above average stay green, good stalk lodging resistance, and adapted to the Central Corn Belt, Northeast, Southeast, Southcentral, Southwest or Western regions of the United States.

30. A method for developing a corn plant in a corn plant breeding program using plant breeding techniques which include employing a corn plant, or its parts, as a source of plant breeding material comprising: using the corn plant, or its parts, of claim 2 as a source of said breeding material.

31. The corn plant breeding program of claim 30 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

32. A corn plant, or parts thereof, produced by the method of claim 30.